

## Radar & ADS-B Monitoring System

## Features



- Situational Awareness display integrating ADS-B and Radar via the Sunhillo Surveillance Monitoring System (SMS)
- Decode 1090 MHz ADS-B, 978 MHz UAT
- Up to 4 ports of Radar
- Network distribution across multiple operation centers

**The 2U Radar & ADS-B Monitoring System (RAMS) Tactical Kit** combines Sunhillo's proven and deployed RICI 5000 radar distribution and conversion platform, the Margate II ADS-B receiver, with the Surveillance Monitoring System (SMS) and packages the system into a portable waterproof 2U tactical kit.

The RAMS tactical kit provides Situational Awareness and real time tracking of all aircraft (Fixedwing, Helicopters, UAS) displayed on a high powered Laptop with the ability to utilize Primary and Secondary Radar feeds coupled with ADS-B.

### **RAMS TACTICAL KIT COMPONENTS:**

**The RICI5000** is currently deployed throughout the Federal Aviation Administration (FAA) and US military at facilities across the country. The RICI 5000 provides

up to 4 ports of radar for surveillance data distribution and conversion.

**The Margate II ADS-B Receiver** is able to process 1090 MHz ADS-B and 978 MHz UAT. Sunhillo's ADS-B Receiver accepts the transmission directly into the Margate II from a TNC connector for the RF antenna feed.

Outputs include a variety of destinations and formats including ASTERIX CAT021 and FAA CAT033 over ethernet.

**The Surveillance Monitoring System (SMS)** reads data from ADS-B, CD-2, ASTERIX and other formats and converts the data to a common XML based Surveillance Data Object for display. The SMS is able to filter based on geographic location and outputs to a 4K display.

**The enclosure** is a waterproof, locking case with telescoping

handle and wheels for easy transport. The 2U case is compact and portable enough to use as carry on luggage. The top of the case is padded and used to store the laptop. Sunhillo's 1U Rack Mounting Sleeve kit is included and is used to mount both the Margate II and the RICI.

**A high performance laptop** is included to utilize the features and 4k capability of the SMS.

**An ADS-B Antenna**, with a range of 200 miles, is included with all Tactical kits along with a 50 ft low loss cable.

# RICI 5000 and Margate II ADS-B Receiver Front and Rear Panels



## Technical Specifications

### Interface

- Margate II ADS-B includes GPS and RF antenna input
- RICI 5000 includes up to 4 ports of radar

### Serial Port Controls

- RS-232, RS-422, RS-449, RS-485, V35, V36, EIA-530, EIA-530A

### ADS-B Input

- Front Panel TNC Connector for ADS-B Antenna
- 978 MHz UAT and 1090 MHz ADS-B
- DF17, DF18 1090ES ADS-B, TIS-B

### ADS-B Output Format

- ASTERIX CAT021 (v.23,v.26, v2.1, v2.4)
- ASTERIX CAT023/033 (FAA v3)

### Ethernet

- 10BASE-T, 100BASE-T, 1000BASE-T, IEEE-802.3

### Protocols

- Synchronous, Asynchronous, HDLC/SDLC, Bi-Sync, Mono-Sync, TCP/IP, UDP/IP

### Message Format

- SGF, ADS-B, ASTERIX, AIRCAT-500, NAS Interfacility, Mode 4, Mode S, MAR, TPS75, ARTS, CD-2, ASR9/11, custom

### Power

- Power usage: 12W Max per unit
- 100-240VAC, 2 Amp Max Power Supply

### 2U Primary Case Dimensions

- Width: 23.5 in / 596.9 mm
- Height: 12 in / 304.8 mm
- Depth: 18.5 in / 469.9 mm
- Weight: 23.5 lbs / 10.66 kg

### Populated 1U Rack Mount Sleeve Kit

- Height: 1.75 in / 44.45 mm
- Width: 17 in / 431.8 mm (without mounting brackets)
- Depth: 9.25 in / 234.95 mm
- Weight: 9 lbs / 4.08 kg

### ADS-B Antenna

- 5 ft 7 in Vertical ADS-B Antenna with 50 ft cable
- Additional Cable length options:
  - 100 ft
  - 200 ft

